

Listing of claims:

Claim 1 (original): A method for transmitting and receiving data between terminal devices on a network, comprising the steps of:

dividing a data file of original data to be transmitted into clusters each having k blocks of data;

generating $t+s$ blocks of parity data for a cluster by encoding s blocks of convolution data and k blocks of original data;

generating $k+t$ blocks of transmission data using the k blocks of original data and t blocks selected from the parity data; and

transmitting the transmission data to another terminal on the network.

Claim 2 (original): The method according to claim 1, wherein the convolution data for a first cluster is generated using data from a second cluster.

Claim 3 (original): The method according to claim 1, wherein transmission data is generated by adding, to the original data of the cluster, t' blocks of data from the $t+s$ blocks of parity data, where $t' > t$.

Claim 4 (currently amended): A method for transmitting and receiving data between terminal devices on a network, comprising the steps of:

dividing a data file of original data to be transmitted into clusters each having k blocks of data;

generating parity data for a first cluster by encoding original data of the first cluster using information from a second cluster;

generating transmission data by adding the parity data to the original data; and

transmitting the transmission data to another terminal on the network.

Claim 5 (original): The method according to claim 4, wherein the parity data is generated by encoding the original data using data selected from parity data of the second cluster.

Claim 6 (original): The method according to claim 4, wherein at least part of the parity data of the first cluster is added to original data of the second cluster when original data of the second cluster is encoded.

Claim 7 (currently amended): A method for transmitting and receiving data between terminals on a network, comprising the steps of:

receiving a data string including original data divided into clusters each having k blocks of data and parity data;

if data of a given cluster is lost during communication, decoding remaining data of the given cluster and restoring original data of the given cluster and convolution data used to generate parity data for the given cluster;

unless the number of blocks of data in the given cluster is sufficient to restore the original data and the convolution data, complementing and decoding data of the given cluster using restored data of another cluster, and restoring the original data and the convolution data; and

generating a data file by concatenating the original data of the clusters.

Claim 8 (original): The method according to claim 7, wherein, unless the number of received blocks of data of the given cluster is sufficient to restore the original data and the convolution data, data of the given cluster is complemented using data acquired by encoding original data and convolution data restored in a cluster immediately before or immediately after the given cluster.

Claim 9 (currently amended): A communication system for exchanging data between terminal devices via a network, comprising:

a transmitting terminal device that divides a data file of original data into clusters each having k blocks of data, generates parity data for a cluster by encoding data in the cluster using data in a

second cluster, and transmits, over a network, transmission data generated by adding the parity data to original data of the cluster; and

a receiving terminal device that receives the transmission data transmitted by the transmitting terminal device and restores the original data for the cluster if part of the transmission data is lost during communication.

Claim 10 (original): The communication system according to claim 9, wherein, unless the number of blocks of received transmission data of the cluster is sufficient to restore original data lost during communication, the receiving terminal device complements the cluster using restored data of the second cluster and restores the original data of the cluster.

Claims 11-18 (withdrawn)